

VU Research Portal

IT Forecast Quality in Measure and Number

Eveleens, J.L.

2011

document version

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

citation for published version (APA)

Eveleens, J. L. (2011). *IT Forecast Quality in Measure and Number*. [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam].

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:

vuresearchportal.ub@vu.nl

Dankwoord	i
Contents	iii
1 Introduction	1
1.1 Setting expectations	1
1.2 Expectations in IT	2
1.3 Research questions	4
1.4 Thesis outline and contributions	4
1.4.1 Terminology	4
1.4.2 IT forecast quality and biases	4
1.4.3 Forecast quality and Chaos project succes	5
1.4.4 IT business value and its quality	6
1.4.5 Summary in dutch	7
1.5 Case studies	7
1.6 Tools of the trade	8
1.7 Related work	8
1.8 Origin of the chapters	11
1.9 EQUITY Research	11
2 Terminology	13
3 Quantifying IT forecast quality	23
3.1 Introduction	23
3.2 Reviewing different cones	25
3.2.1 Cone conditions	28
3.2.2 Simulation	31
3.3 Quality of forecasts	37
3.3.1 Estimating Quality Factor	37

3.3.2	f/a plots	45
3.4	Case studies	55
3.4.1	Typical patterns	56
3.4.2	Landmark Graphics	59
3.4.3	Large multinational company X	62
3.4.4	Large financial service provider Y	65
3.4.5	Large telecommunications organization Z	68
3.4.6	Case comparisons	72
3.5	Enhancing forecast information	73
3.5.1	Basic calculations	74
3.5.2	The confidence interval	76
3.5.3	Distribution of ratios	85
3.6	Benchmarks	90
3.6.1	EQF benchmarks	90
3.6.2	Overruns	92
3.7	Practitioners' guide	95
3.7.1	Lessons learned	95
3.7.2	How to quantify forecast quality	96
3.8	Conclusions	99
4	The rise and fall of the Chaos report figures	101
4.1	Introduction	101
4.2	Misleading definitions	102
4.3	Unrealistic rates	104
4.4	Perverting accuracy	107
4.5	Meaningless rates	108
4.5.1	Applying Standish's definitions	108
4.6	Discussion	111
4.7	Proposed definitions	111
5	Quantifying forecast quality of IT business value	123
5.1	Introduction	123
5.2	Asset business value	125
5.2.1	Indicator limitations	126
5.2.2	Net Present Value	128
5.2.3	Summary	134
5.3	Generalized method	135
5.3.1	Asymptotic behavior	138
5.3.2	Reference point	139
5.3.3	Negative values	147
5.3.4	Summary	156
5.4	Prerequisite data analysis	158
5.4.1	Data overview	158
5.4.2	Re-estimation date	159
5.4.3	Literature benchmark	160

5.4.4	Heterogeneity	162
5.4.5	Summary	167
5.5	Case study	167
5.5.1	NPV	167
5.5.2	Benefits	169
5.5.3	Asset usage cost	171
5.5.4	Project cost	172
5.5.5	Sensitivity analysis	175
5.5.6	Case summary	179
5.6	Enhancing decision information	180
5.6.1	Rationing capital budget	181
5.6.2	Asset business values	183
5.6.3	Summary	184
5.7	Discussion	185
5.8	Conclusions	186
6	Samenvatting (summary in dutch)	189
6.1	Schattingsskwaliteit	189
6.2	Benchmarks uit de literatuur	190
6.3	Schattingsskwaliteit van opbrengsten	191
	Bibliography	193